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# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

7357

June 1, 2016

Lon Thomas  
Star Stone Quarries  
4040 South 300 West  
Salt Lake City, Utah 84107

Subject: First Review of Amended Notice of Intention to Commence Large Mining Operations, Star Stone Quarries, Torrey Quarry, M/055/0016, Wayne County, Utah

Dear Mr. Thomas:

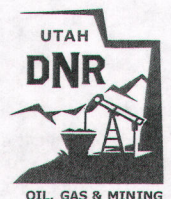
The Division of Oil, Gas and Mining has reviewed the referenced amended Notice of Intention to Commence Large Mining Operations (Notice) which was received by email on May 16, 2016. The attached comments will need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion. Please address only those items requested in the attached technical review by sending replacement pages for the original Notice using redline and strikeouts text. After the Notice is determined technically complete, the Division will ask that you submit two clean copies. Upon final approval, both will be stamped approved, and one copy will be returned for your records.

The Division has the following general comments:

- The submittal should be formatted to easily incorporate additional revisions and amendments.
- The Division may have additional comments based on the review responses.

Please submit your response to this review by July 8, 2016.

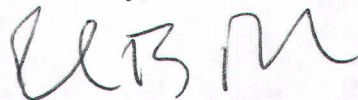




The Division will suspend further review of the Notice of Intention until receiving your response to this letter. Please contact Wayne Western, at 801-538-5263 or me at 801-538-5261 if you have questions concerning the review.

Thank you for your cooperation in completing this permitting action.

Sincerely,

A handwritten signature in black ink, appearing to read 'PBB', followed by a stylized flourish.

Paul B. Baker  
Minerals Program Manager

PBB:whw:eb

Attachment: Review

cc: jreay@blm.gov

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**FIRST REVIEW OF AMENDED NOTICE OF INTENTION  
TO COMMENCE LARGE MINING OPERATIONS**

Star Stone Quarries  
Torrey Quarry  
**M/055/0016**  
**June 1, 2016**

**R647-4-104 – Operator Information and Surface and Mineral Ownership**

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
		Please include an e mail address. While not required by rule, e mail is now a standard method for conducting business.	whw	
	105.3	To avoid confusion, please only show or refer to areas that have been granted partial of full bond release as reclaimed areas. The reclamation border in Map 4 could be construed to mean an area that has been reclaimed rather than an area meant for future reclamation. Please modify the legend to make this clear.	whw & pbb	

**R647-4-105 - Maps, Drawings & Photographs**

**105.2 - Surface facilities map**

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
	R647-4-105.2 (2)	The Notice says, “. . . the operation, is already affecting a total of 12 acres. It is proposed to increase by approximately 2.5 acres to a new total of 14.5 acres.”  Please modify the text to state that the operation is permitted on 14.5 acres. The text should reflect what will be approved not what is proposed.	whw	
	Map 3	On Map 3 and/or other suitable maps please show the location of the sediment pond.	whw	
	Map 2 and Map 3	On Maps 2 and 3, please show that the affected area is, 14.5 acres instead of 12 acres and 2.5 proposed acres. When the amendment is approved, the approved affected area will be 14.5 acres.  In addition, the wording on page 3 of 21, item 5, should be modified to show the expanded areas are within the affected boundary.	whw	
	R647-4-107.B	The Notice discusses a diesel tank within an impervious secondary containment area and barrels of motor oil and hydraulic fluid to be stored within the same containment area. Please show the location of the containment facility on the surface facility map.	whw	
	105.2 (2)	Please show that there are 14.5 acres in the affected area. The affected area will be increased when the amendment is approved.	whw	
	R647-4-107.C	A water tank is mentioned in this and other sections. Please show the location of the water tank and its capacity.	whw	



**105.3 - Drawings or Cross Sections (slopes, roads, pads, etc.)**

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
	R647-4-105.3	Ripping has been removed from the plan; please explain. Ripping and or surface scarification is normally required to successfully establish vegetation.	whw & pbb	
	R647-4-105.3	Please show the sediment pond and sediment trap on appropriate maps. According to Section 105.3, part of the concurrent reclamation practices will be to construct a shallow sediment pond. The Notice says the operator will place large stones slightly below the pond to trap sediment and slow water discharge. The pond will be located where the wash bottom exits the operations.	whw	
	R647-4-105.4	The Notice says no highwalls are proposed. According to "A Dictionary of Mining, Minerals, and Related Terms," a highwall is "the unexcavated face of exposed overburden and coal or ore in an open cast mine or the face of bank on the uphill side of a contour strip mine excavation." It appears, therefore, that there will be highwalls though they may be relatively small. Please revise the text.	whw & pbb	
		Please include cross section of the operational and reclamation phase of the mining operations. Cross section for the reclamation phase after five years will help determine the extent of reclamation and the reclamation cost estimate.	whw	

**R647-4-106 - Operation Plan**

**General Operation Comments**

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
	106.3	The Notice says that soil will not be removed from production stockpiles, the trailer site, or machinery parking. Rule R647-4-107.5 requires that suitable soil material be removed and stored in a stable condition where practical so as to be available for reclamation. Please revise the plan to have all available soils removed from active areas, including product stockpiles and parking areas. Heavy equipment can damage soil texture which is important to support revegetation.	whw	
	106.6	In Section 106.5 the Notice says the depth of soil material ranges from 0 to 20 inches. In Section 106.6 the Notice says the thickness of soil to be salvaged and stockpiled is 0-12 inches. All suitable growth media should be salvaged and stockpiled.	whw	
	106.6	The table in Section 106.6 shows 0.5 acres with less than one inch of topsoil (cannot be salvaged) and 2.0 acres containing up to 12 inches of topsoil. Please account for the other areas within the disturbed areas. If soil has already been removed from these areas please make this statement.	whw	



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Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
	106.6	In Section 106.6, the Notice says, "There will be approximately two and half acres of product stockpiles, trailer site, machinery parking, and access/haul roads, where significant material will not be removed, only graded or compacted. These areas will be ripped, except the road, to 18 inches or to bedrock whichever is less, or pocked marked with an excavator. Since no soil was removed no soil will be imported in the areas." As stated above, topsoil/growth media must be removed before mining operations occur. Please remove and store all topsoil from those areas.  Ripping has been removed from the reclamation cost estimate and from Section 105.3, but it is still in Section 106.6. The Division believes this practice should remain. Please correct this discrepancy.	whw	
	106.6	The amount of stockpiled material is not consistent; sometimes it is listed as 1,000 cubic yards and in others as 5,883 cubic yards. Please correct.	whw	

#### **R647-4-110 - Reclamation Plan**

##### **110.1 - Current & post mining land use**

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
	107 F	The Notice says, "We will also begin backfilling areas that are at final depth. Please refer to Map #4." Please show on Map #4 those areas which have been mined to final depth. Also please provide cross sections showing final depth.	whw	

##### **110.2 – Reclamation of roads, highwalls, slopes, impoundments, drainages, pits, piles, shafts, adits, etc.**

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
	110.2 Slopes	In this and other sections, the slope angle has been increased from 3H:1V to 2H:1V. Please discuss the reason for increasing the slope.	whw	
	110.2 Impoundments	The Notice says the final size of the reclaimed area will be 7.25 acres. Please revise final reclaimed area figures. In Section 106.4 the thickness of the mineral deposit is listed as 100+ feet.	whw	
	110.2 Drainages	Please include a copy of the storm water discharge permit.	whw	

#### **R647-4-112 - Variance**

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
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Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
	Page 20 of 21 approved NOI	<p>In the NOI approved on April 16, 2007, Susan White, who was then the Minerals Program Manager, marked that the variance requested for the bare, exposed rock "NOT APPROVED 4/19/07 SMW." The letter approving the mine specifically denied this variance request because it is not needed. The rules require that available soil be salvaged, so no variance is needed if no soil is available. Likewise, leaving the wash as exposed bedrock is not considered a variance if that was the condition before the mine began operating.</p> <p>Please remove these two variance requests.</p> <p>The request to leave the road through the site was approved in the original mine approval.</p>	whw & pbb	

#### **R647-4-113 – Surety**

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
	Surety Calculations	The operator removed the cost for removing a trailer and water tank. However, in the plan a trailer and water tank are mentioned. Please clarify.	whw	
	110.2	In Section 110.2 Impoundments, Pits & Ponds, the Notice says, "The quarry pit will be partially backfilled with an amount of overburden and waste material to a depth of 14" or more where it is needed to accommodate a slope less than 2:1. The pit will be graded and contoured to approximate the natural contour of the surrounds." There are no line items for backfilling the pits. Please include cost for backfilling the pits.	whw	
		Please include cost to reclaim the pit walls (highwalls). If the highwalls are in solid rock, the slope can be 1H:1V.	whw & pbb	
	Surety Calculations	The cost of a D8R dozer is listed as \$198/hr. In the Wheeler rental rates, the daily rental rate for a D8T is \$2,556/day. Since the total hours for dozer use is 14.95 hours then a daily rate would apply. Please use an hourly rental rate of \$2,556/day / 8 hr/day = \$319.50/hr. Since the rental rate does not include fuel and operating costs, please include \$95.10/hr operating costs (Equipment Watch Bluebook rate). Also include 10% contractor overhead and profit. Total cost for rental, operating and profit is \$456.06/hr.	whw	
	Surety Calculations	The Division usually assumes that the mobilization distance is equal to the distance to the nearest Wheeler dealership. Please calculate mobilization costs from Salina, 70 miles or 1 hour 13 minutes one way.	whw	
	Surety Calculations	Labor costs: The Division uses labor rates from R. S. Means. While Bacon and Davis rates can reflect local conditions, the Division must assume that the contractor doing the work will be out of the area and therefore R. S. Means rates apply. For a machine operator \$77.30/hr., truck driver – heavy \$65.25/hr. Note – labor rates include overhead and profit. Also a supervisor would generally not be required for this size operation and can be deleted.	whw	
	Surety Calculations	Due to the variability of native seed costs, the Division assumes a standard revegetation cost of \$500/acre if seeding done at the time of earthwork and \$1,000/acre if done after earthwork.	whw	



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Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
	Surety Calculations	Please show the indirect costs that were used for the calculations.	whw	
	Surety Calculations	Please include escalation. For 2016 the escalation rate is 0.7%.	whw	